



Bison Oil Well Cementing
 1547 Gaylord Street
 Denver, CO 80206

FIELD INVOICE #
666113

FIELD INVOICE

WELL NO. AND FARM	COUNTY	STATE	DATE	Contractor
Babcock 19N-34HZ	Weld	Colorado	4/20/2017	WMO 252

CHARGE TO	WELL LOCATION		
	Section	TWP	RANGE
Anadarko Petroleum Corporation	4	2N	67W
PO Box 4995	DELIVERED TO		LOCATION 1 CODE
The Woodlands, TX 77387	cr. 24 & cr. 19		Greeley
	SHIPPED VIA		LOCATION 2 CODE
	4023/4024/4030		Plateville
	TYPE AND PURPOSE OF JOB		LOCATION 3 CODE
	SURFACE		Greeley
			WELL TYPE CODE

ITEM	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT
		QTY.	MEAS.		
PUMP CHARGE					\$ -
SURFACE		1		\$ 952.00	\$ 952.00
					\$ -
MILLEAGE CHARGE					\$ -
Pickup	\$1.50 per Mile	52		\$ 1.22	\$ 63.44
Truck/Equipment	\$4.00 per Mile	52		\$ 3.23	\$ 167.96
Truck/Equipment	\$4.00 per Mile	52		\$ 3.23	\$ 167.96
Truck/Equipment	\$4.00 per Mile	52		\$ 3.23	\$ 167.96
CEMENT CHARGE:					\$ -
BFN III		727		\$ 14.69	\$ 10,679.63
ADDITIVES CHARGE:					
Red Dye		16	oz	\$ 15.00	\$ 240.00
FLOAT EQUIPMENT:					
OTHER CHARGES:					
Wait Time		1	hour	\$ 250.00	\$ 250.00

SUB TOTAL	\$ 12,688.95
TAX	\$ -
TOTAL	\$ 12,688.95

If this account is not paid within 30 days of invoice date a FINANCE CHARGE will be made. Computed at a single monthly rate of 1 1/2% which is equal to an ANNUAL PERCENTAGE RATE OF 18%.

BABCOCK 19N-33HZ RIG: WhiteMtn 252
CRYSTAL AGUILA. USER ID ZCMK6
CONSULTANT NAME: Lane T.
GL CODE: 8001 2090 AFE#2121896.DRL
DATE: 4-20-17 SIGNATURE: [Signature]

SUBJECT TO CORRECTION

 Bison Oil Well Cementing, Inc. Representative

Customers hereby acknowledges and specifically agrees to the terms and conditions of this invoice, including, without limitation, the provisions on the reverse hereof which include the release and indemnity.



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/20/2017
 Invoice #: 666113
 API#: 05-123-43808
 Foreman: Nick Vigil

Customer: Anadarko Petroleum Corporation
 Well Name: Babcock 19N-34HZ

County: Weld
 State: Colorado
 Sec: 4
 Twp: 2N
 Range: 67W

Consultant: Lane
 Rig Name & Number: WMO 252
 Distance To Location: 26 Miles
 Units On Location: 4023/4019/4030
 Time Requested: 14:30
 Time Arrived On Location: 13:45
 Time Left Location:

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BFN III
Casing Weight (lb) : 36.00	Cement Density (lb/gal) : 14.2
Casing Depth (ft.) : 1,864	Cement Yield (cuft) : 1.49
Total Depth (ft) : 1874	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 15%
Conductor Length (ft) : 80	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.25	BBL to Pit: 0.0
Shoe Joint Length (ft) : 44	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 10	H2O Wash Up (bbls): 20.0
Max Rate:	Spacer Ahead Makeup
Max Pressure:	

Calculated Results	Pressure of cement in annulus
Displacement: 141.47 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	Hydrostatic Pressure: 1375.07 PSI
cuft of Shoe 19.10 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Pressure of the fluids inside casing
cuft of Conductor 61.05 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Displacement: 784.75 psi
cuft of Casing 1002.68 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Shoe Joint: 32.46 psi
Total Slurry Volume 1082.83 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Total 817.21 psi
bbls of Slurry 192.85 bbls (Total Slurry Volume) X (.1781)	Differential Pressure: 557.86 psi
Sacks Needed 727 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Collapse PSI: 2020.00 psi
Mix Water 129.43 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Burst PSI: 3520.00 psi
	Total Water Needed: 320.90 bbls

X
 Authorization To Proceed

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.

Babcock 19N-34HZ

